COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

RATE ADJUSTMENT OF WESTERN KENTUCKY GAS COMPANY ON NOTICE) CASE NO. 8839

O R D E R

On June 10, 1983, Western Kentucky Gas Company ("Western") filed its notice with the Commission seeking authority to increase its rates for service rendered to its customers by $6.8 million, or 3.9 percent over normalized test period revenues, to become effective July 1, 1983. Western stated that the additional revenue was necessary to pay increased wages, materials, and debt costs that are necessary in order to provide adequate service to its customers. In this Order the Commission has granted additional operating revenues of $5,093,627.

In order to determine the reasonableness of the request for additional revenues the Commission suspended the proposed rate increase until December 1, 1983. Western was directed to give notice to its customers of the proposed rates and the scheduled hearing pursuant to 807 KAR 5:025. A motion to intervene in this proceeding was filed by the Consumer Protection Division in the Office of the Attorney General ("AG"). This motion was granted and no other parties formally intervened.

A public hearing was held in the Commission's offices in Frankfort, Kentucky, on October 11, 1983, with the parties of record represented. Briefs were filed by October 28, 1983, and responses to all data requests have been submitted.

COMMENTARY

Western is a division of Texas American Energy Corporation ("TAE") and provides natural gas service to approximately 137,000 customers in western and central Kentucky. Western's primary pipeline suppliers are Texas Gas Transmission Corporation and Tennessee Gas Pipeline Company.

TEST PERIOD

Western proposed and the Commission has accepted the 12-month period ending March 31, 1983, as the test period for determining the reasonableness of the proposed rates. In utilizing the historic test period the Commission has given full consideration to appropriate known and measurable changes.

VALUATION

Western presented the net original cost rate base and capital structure as valuation methods in this case. The Commission has considered these and other elements of value in determining the reasonableness of the proposed rates.

Net Original Cost

Western proposed a test year-end jurisdictional rate base of $55,610,275.[1/] The Commission is of the opinion that the proposed rate base is generally proper and acceptable for rate-making purposes with the following exceptions:

The Commission has increased the rate base by $17,618 to recognize 1 year's amortization of the "surplus" deferred federal income taxes resulting from the reduction in the corporate tax rate from 48 to 46 percent. The Commission is of the opinion that amortizing this surplus over a period of 5 years better insures that the ratepayers who originally paid the taxes at 48 percent will receive the benefit of the reduced tax rate. The increase represents the difference between the amount Western amortized during the test year and the annualized 5-year amortization of $22,207.

The net investment rate base has been further adjusted to reflect the accepted pro forma adjustments to operation and maintenance expenses in the calculation of the allowance for working capital. The effect of this adjustment is to reduce rate base by an additional $32,260.

All other elements of the net original cost rate base have been accepted as proposed by Western. The net original cost rate base devoted to utility jurisdictional service is determined by the Commission to be as follows:

Utility Plant in Service	$82,036,043
Construction Work in Progress	1,296,858
Gas Stored Underground-Non-Current	1,775,865
Total Utility Plant	$85,108,766
Add:	
Materials and Supplies	$ 1,659,179
Gas Stored Underground-Current	7,319,246
Prepaid Gas Purchases-Average	3,390,849
Prepayments	251,421
Working Capital	1,922,674
Subtotal	$14,543,369
Deduct:	
Accumulated Depreciation	$36,765,172
Customer Advances for Construction	1,785,105
Deferred Income Taxes	5,286,225
Unamortized Investment Tax Credit	220,000
Subtotal	$44,056,502
Net Original Cost Rate Base	$55,595,633

Capital Structure

Western proposed a jurisdictional end-of-test-year capital structure of $51,939,751 which contained 45.81 percent common equity, 23.45 percent long-term debt, 25.38 percent short-term debt and 5.36 percent Job Development Investment Tax Credit ("JDIC").2/ Mr. Hugh Larkin, witness for the AG, proposed to use either a double leveraged capital structure or the consolidated capital structure for TAE as the appropriate capital structure for Western. The double leveraged capital structure contained 2.24 percent common equity, 43.56 percent TAE bank loans, 23.45 percent long-term debt, 25.38 percent short-term debt and 5.37 percent JDIC.3/ The December 31, 1982, consolidated capital structure for TAE contained 22.71 percent common equity, 66.67 percent long-term debt and 10.62 percent short-term debt.4/ In its post-hearing brief, the AG proposed to use the consolidated capital structure for Western.5/

The Commission is concerned with the high level of relatively more expensive common equity in Western's end-of-test-year capital structure. However, the double-leveraged and consolidated capital structures proposed by the AG are highly leveraged and do not reflect the overall riskiness of Western. The Commission is of the opinion that an updated, end-of-test-year capital structure should be adopted for rate-making purposes. This capital structure, which reflects the issuance and sale by Western of $11 million of first mortgage bonds after the test year to retire short-term debt,6/ is calculated as follows:

	Amount	Percent
Long-term Debt	$24,306,244	46.8
Short-term Debt	2,494,748	4.8
Common Equity	25,138,759	48.4
Total	$51,939,751	100.0

In determining the capital structure the Commission has allocated the JDIC of $2,783,924 to each capital component on the basis of the ratio of each component to the total capital structure excluding JDIC. The Commission is of the opinion that this treatment of JDIC complies with the requirements of the Internal Revenue Code and insures that ratepayers receive an equitable share of the benefits of JDIC.

The Commission is cognizant of the conservative nature of the capital structure allowed herein and will take this into consideration in its determination of the appropriate cost of equity for Western.

REVENUES AND EXPENSES

Western had net operating income of $4,890,202 during the test period. In order to reflect more current and anticipated operating conditions, Western proposed several adjustments to its test period revenues and expenses which resulted in an adjusted net operating income of $3,518,597.[7/] The Commission is of the opinion that the proposed adjustments are generally proper and acceptable for rate-making purposes with the following exceptions:

Revenues Normalization

Western proposed an adjustment to increase operating revenues by $8,147,815 to reflect the purchased gas adjustment

("PGA") rate in effect in Case No. 8227-M at the time the application was filed. The Commission has made an adjustment to reduce Western's operating revenues by $4,115,198 in order to reflect test period sales normalized for the current PGA rate as approved in Case No. 8227-S.

Weather Normalized Sales

Western proposed an adjustment to increase revenues by $8,101,812 and purchased gas expense by $6,183,534 to reflect the level of revenues and expense that would have occurred during the test year under normal weather conditions. The AG, through Mr. Larkin, proposed an adjustment for normal weather conditions that increases revenue by $10,167,293 and purchased gas expense by $7,018,199.

The level of heating season sales by gas distribution utilities varies greatly depending upon weather conditions, primarily temperatures. A heating degree day is the measurement used to quantify temperatures as they relate to gas sales. During the test year Western's service area experienced a relatively mild winter with 3,828 heating degree days. The 30-year average number of degree days for Western's service area, as compiled by the weather bureau for the years 1951-1980, is 4,334. Using this degree day deficiency of 506 Western determined that, had temperatures the past winter been normal, its sales would have been greater by approximately 1.7 million Mcf and revenues would have been greater by $8.1 million.

Mr. Larkin calculated his adjustment using a 15-year average number of degree days, compiled for the years 1968-1982, of 4,463. In this manner Mr. Larkin determined that Western's test year sales were understated by approximately 2.1 million Mcf due to the mild winter.

The difference in the adjustments proposed by Western and the AG is the number of years included in the base period used to determine a normal level of degree days. Mr. Larkin claims that climatological changes are occurring which make the colder, 15-year period more representative of normal weather conditions. Western's 30-year period, which is warmer, reflects data compiled by the weather bureau and has been previously endorsed by the Commission as the standard, or uniform, period of time all gas utilities should use in calculating weather normalization adjustments.[8/]

Mr. Larkin claims the colder weather is more representative of normal conditions, yet he produced no studies or reports to support that claim and he testified that meteorology was not his area of expertise.[9/] Therefore, the Commission sees no reason to retract its previous approval of a 30-year base period and, taking notice of recent reports concerning the warming of the atmosphere, or the "Greenhouse Effect," the Commission finds even less reason to be persuaded by Mr. Larkin's proposal.

Therefore, the Commission has rejected Mr. Larkin's proposed adjustments to revenue and expense and has accepted the adjustments proposed by Western. However, the Commission has modified the proposed adjustments to reflect Western's current PGA rate and current cost of gas. These modifications result in an adjustment to increase revenue by $7,497,897 and an adjustment to increase gas cost by $5,625,350.

Normalized Cost of Gas

Western proposed an adjustment to increase its test year gas cost by $12,241,797 based on the supplier rates reflected in Case No. 8227-M. The AG proposed an adjustment to increase Western's cost of gas based on the supplier rates from Case No. 8227-M by $9,468,419.

There are two differences between the adjustments proposed by Western and the AG: First, Western priced its gas withdrawn from storage at the current commodity cost while the AG applied an average cost to the gas withdrawn from storage; second, Western proposed an adjustment to its deferred cost of gas based on pro forma lost and unaccounted-for gas of 2 percent while the AG made no adjustment but reflected the actual test year line loss of 1.4 percent.

Western's proposal to price gas withdrawn from storage at the current cost of gas is, in effect, an attrition allowance, and one that the Commission has allowed in previous cases. The effect of this allowance is to increase profits as the cost of gas increases, although the Commission has constantly attempted to insure that the PGA merely recovers increases in the cost of gas. In its investigation of this matter in several recent cases the Commission concluded that there were profits due to increasing gas costs but, even with these inventory profits, none of the utilities had excess earnings. Furthermore, the Commission is of the opinion that the magnitude of gas price increases in the foreseeable future should be significantly less than the increases experienced in recent years, and therefore, such profits should not continue. Therefore, Western's pricing of gas withdrawn from storage has been accepted and the adjustment proposed by the AG is hereby denied. However, if an increase in gas prices of a substantial magnitude does occur, the Commission will give due consideration to the issue of inventory profits in Western's PGA filings seeking authority to pass those increases along to its customers.

In proposing an adjustment to increase its lost and unaccounted-for gas to a level greater than what was incurred during the test year Western has asked the Commission to deviate from its established policy regarding line loss adjustments. Generally, the Commission does not allow adjustments to line loss as long as the loss is less than 5 percent.[10/] Mr. Thomas Brady, Western's Vice-President of Engineering, testified that the line loss reflected during the month of March when sales were high was not representative and that an error in the average meter-reading date would account for lost and unaccounted-for gas being understated.[11/] Mr. Brady further testified that a summer line loss, when sales are minimal, would be more representative than the loss reflected in the month of March and would reflect Western's normal lost and unaccounted-for gas of 2 percent.[12/] However, Western's monthly reports filed with the Commission reflect the smaller line losses continuing through the months since the end of the test year which includes the summer months when sales volumes are low. For no 12-month period reported from

April 1983 through September 1983 did Western's lost and unaccounted-for gas exceed 1.66 percent and for the 9 months ended September 1983 the line loss was only 1.3 percent. Unless the average meter-reading date was incorrect each and every month, which is highly improbable, the Commission must conclude that the test year line loss is representative and, absent any additional evidence, it must reject Western's adjustment to increase its lost and unaccounted-for gas to 2 percent.

Based on the current supplier rates being charged Western the Commission has calculated an adjustment to decrease Western's cost of gas by $481,163. Such adjustment reflects withdrawals of gas from storage at the current commodity cost and the reported test year lost and unaccounted-for gas of 1.4 percent.

Unbilled Revenues

The AG proposed an adjustment of $3,014,272, consisting of two parts, to increase test year revenues to reflect unbilled revenues. The first part consisted of the difference between unbilled revenues as of March 31, 1982, and March 31, 1983, in the amount of $2,843,108; the second part represented the net amount of unbilled revenues as of March 31, 1982, of $855,820 amortized over a 5-year period.

Western currently records revenue based on actual billings in that meters read during a particular month are billed and booked in that month. Mr. Larkin contends that Western should also book the revenues for service rendered from the meter-reading date until the end of the month. Mr. Larkin also recommends that Western should record as expense the cost of gas delivered but unbilled that Western currently defers until the following month when customers are billed. Mr. Larkin maintains that failure to record unbilled revenue and deferred gas cost in the month the gas is delivered improperly matches the revenues and expenses of the test period. However, Western's witness, Mr. Gene Greable, of the public accounting firm of Arthur Anderson & Company, testified that recording revenues on the basis of meters read during the accounting period was in accordance with general industry practice and with generally-accepted accounting principles.[13/] Mr. Greable also argues that the adjustment proposed by Mr. Larkin constitutes retroactive rate-making.[14/]

Mr. Larkin did not explain why the unbilled revenues at the end of the test period were greater than at the beginning of the test year except to say that "the volumes of gas caused the change."[15/] However, Mr. Brady did show that the greater volumes reflected in March 1983 were due to colder weather during that period than during March 1982, just prior to the test year.[16/] Mr. Brady further contended that the adjustment proposed by Mr. Larkin would distort the test year sales level by giving double recognition to the effects of the weather normalization adjustment.

In determining revenue requirements the Commission utilizes an historical test year adjusted for known and measurable changes. In this proceeding the Commission has accepted Western's proposed weather normalization as such an adjustment thereby basing Western's rates on projected, rather than actual, sales volumes. Were there not a weather normalization adjustment, the

Commission would be concerned that the difference between billed and unbilled revenues was so great; however, based on the evidence presented in this proceeding, the Commission concludes that the differences were due to changes in weather conditions which are already recognized in the weather normalization adjustment. Furthermore, even though the test year sales volume is based on billed sales rather than actual deliveries of gas, test year sales, adjusted for normal weather conditions, should be representative of normal sales for any given 12-month period. Therefore, the Commission will not accept the first part of Mr. Larkin's proposed adjustment.

Absent any arguments by the AG that recognizing unbilled revenues affects sales volumes for reasons unrelated to temperature and weather conditions, the adjustment to amortize, over 5 years, the net unbilled revenues at the beginning of the test year is clearly an attempt to recognize and offset "excessive" revenues generated prior to the test year. Any such offset in this proceeding would, as Mr. Greable stated, be akin to allowing a current or future recovery of prior year's deficiencies in achieving an allowed rate of return and would plainly constitute retroactive rate-making. Therefore, the second part of the AG's adjustment has also been rejected for rate-making purposes.

<u>Gas Used by Company</u>

Based on the supplier rates reflected in Case No. 8227-M Western proposed an adjustment of $56,895 to reflect an increase in the cost of gas used in its operations. This adjustment, like the adjustment to gas cost, reflected storage withdrawals priced at the current commodity price. The AG proposed an alternative adjustment of $26,401 which reflected storage withdrawals priced at an average inventory cost. The Commission, in accordance with its decision on Western's gas cost, will allow the withdrawals from inventory to be priced at the current rate for Western's zone 3 purchases from Texas Gas. Based on the recent decreases in the cost of gas, the Commission has increased Western's test year expense for gas used in its operations by $28,071.

Payroll Expense

Western proposed an adjustment of $498,972 to increase its payroll expense to reflect the level of salaries and wages in effect prior to the filing of its application in this proceeding. Mr. Larkin recommended one adjustment to the pro forma payroll expense which was the elimination of the overtime normalization of $28,457.

Western attempted to show that the test year level of overtime was low due to the abnormally warm weather experienced. The record shows that the test year level of overtime is comparable to the levels experienced in the previous 2 years when weather conditions were not abnormal. Mr. Greable maintained that an adjustment of this amount need not be considered as it represents only a small part of Western's total annual payroll expense of $8.5 million.[17]

The Commission is not persuaded by Western's arguments and will accept Mr. Larkin's recommendation to eliminate the proposed overtime normalization adjustment. Regardless of how large or small an item of expense might be it is the Commission's responsibility to determine whether such expense is reasonable and proper for rate-making purposes. In this instance, Western has not shown its overtime adjustment to be acceptable for rate-making purposes.

Payroll Taxes

Based on the increases in wages and salaries reflected in its payroll adjustment, Western proposed an adjustment to increase payroll tax expense by $56,134. Mr. Larkin proposed to reduce this amount by $37,719 to $18,415 to reflect actual tax rates and the proper allocations to expense and capitalization. Western's response to Mr. Larkin's proposal was that it estimates its taxes on a monthly basis and that the adjustment proposed by Mr. Larkin amounts to but $35,000 out of total payroll taxes of $700,000. The Commission is of the opinion that Western should be more precise in its allocation of taxes in the future and that an adjustment is necessary and appropriate to reflect the proper allocation of payroll taxes. Therefore, the increase in payroll taxes for rate-making purposes has been limited to $18,415 as was recommended by the AG.

Pension Expense

Western proposed an adjustment of $34,978 to increase pension expense based on the increase in the required pension contribution per the 1983 actuarial report. This adjustment reflected an allocation of 95 percent of pension costs to expense while only 83 percent of salaries and wages were charged to expense during the test year. The AG recommended an adjustment to decrease pension expense by $89,036 to reflect an 83 percent allocation of pension costs.

The Commission is of the opinion that Western's fixed allocation of pension costs is improper and should be discontinued. Furthermore, absent any evidence to the contrary, the Commission is of the opinion that future allocations of pension costs should be in proportion to the allocation of wages and salaries, and such an allocation should be reflected for rate-making purposes. Therefore, the AG's adjustment has been adopted and Western's pension expense has been adjusted downward by $89,036.

Computer Operations Expense

Western proposed an adjustment to increase computer operations expense by $84,599 to reflect the net decrease in revenues generated from outside users due to a decline in the number of outside users. The AG recommended that this adjustment be eliminated on the grounds that ratepayers should not be required to pay for "excess computer capacity." The record herein fails to show that Western has such excess capacity but does show, contrary to the AG's assumption, that Western sells available computer time to outside users during off-peak periods when Western's utility operations do not require its full computer capacity. The Commission, therefore, is of the opinion the proposed adjustment is reasonable and should be accepted for rate-making purposes.

Legal Settlement Expenses

During the test year Western incurred $85,025 in expense for settlement payments involving legal claims against it. Western proposed to amortize this unusually large expense over 2 years for rate-making purposes and proposed to reduce its expense to $42,512. Mr. Larkin proposed to eliminate the entire expense for rate-making purposes because the claims against Western during the test year were extraordinary and non-recurring in nature.

Western has incurred an average level of expense for claims of this type of $62,000 annually over the last 5 years. Western incurs these costs because it is self-insured against liability for personal injury or property damage under $250,000 per incident. This self-insurance program has been less costly for Western than other insurance alternatives and the Commission is of the opinion that the adjusted level of expense of $42,512 is neither extraordinary or non-recurring in nature, but rather, is representative of the annual level of expense normally incurred by Western for legal settlements. Therefore, the adjustment proposed by Western has been accepted herein.

Amortization of Acquisition Adjustment

Western included in its test period operations the annual amortization of its acquisition adjustment. Since the Commission has previously disallowed the inclusion of the acquisition adjustment in Western's rate base,[18/] the Commission is of the opinion that the associated expense should also be disallowed. Therefore, Western's test period operating expenses have been reduced by $9,722 for rate-making purposes.

Promotional Advertising

Western included in its test period operating expenses $36,681 for institutional advertising. 807 KAR 5:016 specifically disallows this type of advertising expense and places the burden of proof on the utility to show that the inclusion of any advertising expenditures for rate-making purposes will result in material benefit to the ratepayers. Western has failed to prove any such benefit and therefore the Commission has reduced Western's operating expenses accordingly.

Organization Dues

Mr. Larkin proposed to reduce Western's operating expenses by $14,115 to eliminate various organizational dues from expense for rate-making purposes. Mr. Larkin claimed that Western did not demonstrate any meaningful or measurable advantages to its customers from its participation in organizations other than the American Gas Association. Although it has expressed its concern about these costs in the past, the Commission is of the opinion that Western's membership in organizations such as the Southern Gas Association and the Kentucky Gas Association is beneficial to Western's management and its customers. Therefore, the costs of membership in these organizations are expenses the Commission considers proper and acceptable for rate-making purposes.

Miscellaneous General Expenses

Mr. Larkin proposed to eliminate, for rate-making purposes, $30,909 for various expenses related to moves of Western personnel due to promotions and transfers and due to the installation, maintenance, and renovation of heating systems, appliances, etc., in an executive's home. The Commission is of the opinion that costs related to transfers and/or promotions of qualified personnel are necessary costs incurred in the normal course of business and should be included for rate-making purposes. However, the Commission finds little benefit to Western's customers from the costs incurred for materials and work at an executive's home. Therefore, the Commission has reduced Western's operating expenses by $13,907 to exclude these expenses for rate-making purposes.

Amortization of Excess Tax Deferrals

Effective January 1, 1979, the corporate federal income tax rate was reduced from 48 to 46 percent. Therefore, income taxes deferred on differences between book and tax depreciation prior to 1979 at 48 percent will be paid at 46 percent when these differences reverse. There is a difference between the amount deferred at 48 percent and the amount to be paid at the 46 percent rate which can be characterized as excess deferred taxes.

At March 31, 1983, Western reported excess deferred federal income taxes of $111,035.[19/] As stated earlier, the Commission will amortize this amount over 5 years for rate-making purposes which results in an annual reduction in income tax expense of $22,207. Western has been amortizing deferred taxes at a rate of $4,589 a year; therefore, an adjustment of $17,618 has been made to reflect the 5-year amortization. In order that the accumulated excess deferred taxes can be readily identified in future rate cases, Western should transfer the excess to a separate liability account.

It should be pointed out that if the tax rate is increased in the future, fairness will require that any deficiency in the deffered tax reserve be provided through rates at that time.

Interest Synchronization

Western proposed to increase interest expense by $275,439 based on its proposed capital structure, excluding JDIC. The AG, based on the double leveraged capital structure recommended by Mr. Larkin, proposed to increase interest expense by $2,743,671. Western contends that the Commission's practice of assigning JDIC to all components of the capital structure and treating the interest cost associated with JDIC debt capital as a deduction in computing federal income tax expense could possibly be a violation of Internal Revenue Service regulations. As support for its argument, Western cited the unpublished opinion of the Kentucky Court of Appeals in Continental Telephone Company v. Public Service Commission, 82-CA-2657-Mr, in which the court found in favor of Continental Telephone Company.[20] Considering that a final decision in Continental is imminent the Commission finds it reasonable to adopt, in this proceeding, its recent decision regarding this issue in Case No. 8734, Adjustment of Rates of Kentucky Power Company, in its Order of October 31, 1983.[21] In that proceeding, at the request of Kentucky Power Company to avoid additional judicial review of this issue, the Commission stated that if a final judicial opinion should be adverse to the Commission's position, it would consider a rate adjustment to generate the revenues associated with JDIC.

The Commission continues to be of the opinion that its past treatment of JDIC is proper and consistent with IRS regulations and such treatment will be continued in this proceeding. However, as in Case No. 8734, this Order will eliminate the need for appeal of this matter at the judicial level.

At this time, in accordance with past practice, the Commission has applied the cost rates applicable to long-term debt and short-term debt to the JDIC allocated to the debt components of the capital structure. Using the updated capital structure allowed herein, the Commission has computed a net interest adjustment of $466,534 which results in a reduction to income taxes of $229,721.

After applying the combined state and federal income tax rate of 49.24 percent to the accepted pro forma adjustments, the Commission finds that Western's operating income should be decreased by $916,527 to $3,973,675.

The adjusted net operating income is as follows:

	Actual	Adjustments	Adjusted
Operating Revenues	$156,124,536	$3,382,699	$159,507,235
Operating Expenses	151,234,334	4,299,226	155,533,560
Net Operating Income	$ 4,890,202	$ (916,527)	$ 3,973,675

RATE OF RETURN

The embedded cost of Western's long-term debt was 8.28 percent at the end of the test year.22/ After the end of the test year, Western received authorization to issue and sell $11,000,000 of new long-term debt at a 13.75 percent interest rate. The proceeds would be used to retire short-term debt Western had accumulated under its revolving line of credit.[23] Including the cost of the new long-term debt in the embedded cost increases the embedded cost of long-term debt to 10.86 percent.[24] The cost of short-term debt dropped from 13 percent to 11 percent, which was the current prime rate in September.[25] The 12-month average prime rate through September, 1983, was 11.03 percent.[26] Mr. Larkin proposed an 8.28 percent cost for long-term debt and an 11 percent cost for short-term debt.[27] The 8.28 percent cost did not reflect the long-term debt issued beyond the test year. The Commission is of the opinion that the 10.86 percent cost of long-term debt and the 11 percent cost of short-term debt are reasonable and reflect Western's actual costs.

Mr. Robert S. Jackson, Senior Vice President of Stone & Webster Management Consultants, Inc., and witness for Western, stated that the minimum return on equity required by Western was 16.75 percent.[28] Mr. Jackson performed a discounted cash flow ("DCF") analysis and a risk premium analysis to determine the appropriate return on equity. The required return on equity, determined by applying his DCF analysis to 10 comparable gas companies, ranged from 17.1 percent to 17.2 percent at a market to book ratio of 1.1 and from 18.6 to 18.7 percent at a market to book ratio of 1.2.[29] The required return on equity based on Mr. Jackson's risk premium analysis was from 17.4 percent to 18.3 percent.[30]

The Commission has strong reservations as to the validity and usefulness of the risk premium analysis. The average risk premium for the period 1960 to 1981 was 5 percentage points.[31/] The standard deviation for that period was 2.9 percentage points and the coefficient of variation was 58 percent.[32/] Statistically, the variability of the risk premium was quite pronounced. At the hearing, Mr. Jackson agreed that a large standard deviation and coefficient of variation indicated a great deal of variability in the data and he also stated that he would not rely solely on the risk premium analysis to measure the cost of equity, for that reason.[33/] The Commission is not convinced that an historical average risk premium is applicable to current bond rates to determine the cost of common equity, given the variability of the risk premium over time.

Mr. Jackson adjusted the dividend yield component of his DCF analysis upward so the return on equity would be sufficient to produce a market to book ratio of 1.1 to 1.2.[34/] The adjustment was intended to protect Western from the effects of market pressure and selling expenses and allow it to earn a return on equity sufficient to maintain a market to book ratio of 1. However, Western has no publicly traded stock and price fluctuations caused by the sale of new stock can be positive as well as negative. Moody's Annual Public Utility Market Price Index increased from the preceding year 10 times during the last 20 years and decreased 10 times, with the average increase being 8.2 percent and the average decrease being 9.3 percent.[35/] The average increase was only slightly less than the average decrease. The Commission is not convinced that an adjustment for selling expenses or market pressure is required for Western.

The dividend growth rate component in the DCF calculation reflects the investor's expectations of how much the dividend will increase in the future. For every time period that Mr. Jackson calculated historical growth rates for earnings and dividends, the dividend growth rate exceeded the earnings growth rate.[36] Dividends cannot continue indefinitely to grow faster than earnings because dividends are paid from earnings. Given that, investors might expect a dividend growth rate lower than the one calculated by Mr. Jackson. Using a lower dividend growth rate would result in a lower cost of common equity, as determined by a DCF analysis.

Finally, many of the comparison companies Mr. Jackson selected also engage in nonregulated and nonutility activities, such as oil and gas exploration.[37] The Commission is not convinced that Western is of equal risk to the comparison companies because of their nonutility activities. Therefore, the DCF determined cost of equity would have to be adjusted to reflect the appropriate risk relationship between Western and the comparison companies.

Mr. Larkin did not perform an analysis to determine the appropriate cost of equity to Western. However, in its brief, the AG stated that a return on equity in the range of 14 to 15 percent was reasonable.[38] The dividend yield for the Moody's nine Gas Distribution Companies, for September 29, was 9.51 percent.[39] Applying a 5 percent dividend growth rate to a 9.51 percent dividend yield would produce a 14.5 percent return on equity, using the DCF formula.[40]

In Case No. 8227, which was Western's most recent rate case, the Commission granted Western a 15 percent return on equity which was applied to a 40.05 percent equity ratio. That case was decided during a period of double digit inflation and unprecedented capital costs. Therefore, after having considered all the evidence, including current economic conditions, and having given due consideration to Western's conservative capital structure, the Commission is of the opinion that a range of returns on equity of 14 to 15 percent is fair, just and reasonable. This range of returns, in particular, reflects the highly conservative nature of Western's capital structure and the risk differential between Western and the comparison companies used by Mr. Jackson. A return on equity in this range would not only allow Western to attract capital at reasonable costs to insure continued service and provide for necessary expansion to meet future requirements, but also would result in the lowest reasonable cost to the ratepayer. A return on common equity of 14.5 percent will allow Western to attain the above objectives.

Rate of Return Summary

Applying rates of 14.5 percent for common equity, 10.86 percent for long-term debt and 11 percent for short-term debt to the capital structure approved herein produces an overall cost of capital of 12.63 percent. The additional revenue granted will provide a rate of return on net investment of 11.80 percent. The Commission finds this overall cost of capital to be fair, just and reasonable.

REVENUE REQUIREMENTS

The Commission has determined that Western needs additional annual operating income of $2,585,525 to produce a rate of return of 15 percent on common equity based on the adjusted historical test year. After the provision for state and federal income taxes there is an overall revenue deficiency of $5,093,627 which is the additional amount of revenue granted herein. The net operating income required to allow Western the opportunity to pay its operating expenses and fixed costs and have a reasonable amount for equity growth is $6,559,200. This level of operating income will provide a rate of return on net original cost of 11.80 percent and an overall return on total capitalization of 12.63 percent.

The rates and charges in Appendix A are designed to produce gross operating revenue of $164,600,862 which includes other operating revenue of $283,740.

RATE DESIGN AND REVENUE ALLOCATION

Western proposed to allocate the revenue increase by increasing Rate G-1 6.4 percent and by increasing the rates charged to the interruptible customers .1 percent. It proposed to implement a customer charge for Rate G-1 of $3.25 for residential and $7.50 for non-residential. Western's witness, Mr. Randall Powell, Vice President and Manager of Gas Services for Stone and Webster Management Consultants, Inc., testified that Western's intent was to cover a larger share of its fixed costs by imposing a basic customer charge on its firm customers. Calculations were given to substantiate the fixed cost amount; however, the

Commission was not convinced that the methodology utilized by Western's witness, Ms. Carol Kinsler, of Stone and Webster Management Consultants, Inc., was appropriate in this case. Therefore, the Commission has decreased the proposed customer charge by the amount of decrease in Western's proposed revenue increase.

Western proposed to change its existing rate design by splitting Rate G-2 into Rate G-2 and Rate G-3. Both classes will be interruptible but Rate G-3 customers are contracted to take a minimum of 200,000 Mcf per year while Rate G-2 customers have no contracted minimums. The tariffs for both classes include language for high priority service which allows the interruptible customers to contract for firm amounts of gas to be billed at the same charges as G-1 customers. Western's proposal includes a $.04 reduction for interruptible G-3 customers and a $.13 increase for interruptible G-2 customers. The reasoning given by Mr. Powell for this change was to keep the cost of gas at a competitive level with alternate fuels, mainly #6 fuel oil, thereby retaining the sales load of the industrial class capable of switching to another fuel source. Consistent with this line of reasoning Western has proposed that all future increases in contract demand charges be passed on only to the firm customers purchasing gas under the G-1 rate schedule. This will assure cost recovery during periods of declining sales and allow Western to better price its gas supplies to interruptibles.41/

The AG stated in its brief filed October 28, 1983, that Western's rate-design proposal is arbitrary and should be rejected in favor of an evenhanded approach. The AG however did not propose any alternative approaches to be considered by the Commission in designing rates for Western.

The Commission is of the opinion that the division of Rate G-2 into two separate rate classes will be of benefit to both Western and the interruptible customers and should be approved. Facts presented in this case show that the interruptible customers do indeed place a demand on the system,[42/] that service to the interruptible customers was interrupted for only 1 day during the test year,[43/] and that Western's gas prices are well within the 15 percent premium range that natural gas can command over #6 fuel oil.[44/] Considering these items the Commission has determined that it would be unfair, unjust and unreasonable to expect the firm customers to pay all future increases in contract demand charges; therefore, this proposal should be denied.

SUMMARY

The Commission, having considered the evidence of record and being advised, is of the opinion and finds that:

1. The rates in Appendix A are the fair, just and reasonable rates for Western and will produce gross annual revenue of approximately $164,600,862.

2. The rates of return granted herein are fair, just and reasonable and will provide for the financial obligations of Western with a reasonable amount remaining for equity growth.

3. The rates proposed by Western would produce revenue in excess of that found reasonable herein and should be denied upon application of KRS 278.030.

IT IS THEREFORE ORDERED that the rates in Appendix A be and they hereby are approved for service rendered by Western on and after December 1, 1983.

IT IS FURTHER ORDERED that the rates proposed by Western be and they hereby are denied.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Western shall file with the Commission its revised tariff sheets setting out the rates approved herein.

Done at Frankfort, Kentucky, this 1st day of December, 1983.

PUBLIC SERVICE COMMISSION

Chairman

Vice Chairman

Commissioner

ATTEST:

Secretary

FOOTNOTES

1. Notice of Application, Exhibit 6, page 3.

2. *Ibid*., page 1.

3. Larkin Exhibit, HL-3.

4. *Ibid*., HL-2

5. AG's post-hearing brief, page 4.

6. Long-term debt was increased and short-term debt was decreased by the same amount.

7. Notice of Application, Exhibit 5, page 1.

8. Order in Case No. 8616, Louisville Gas and Electric Company, entered March 2, 1983, page 13.

9. Transcript of Evidence ("T.E."), October 11, 1983, page 119.

10. *Ibid*., pages 26 and 27.

11. *Ibid*., pages 27 and 28.

12. *Ibid*., page 47.

13. Greable Rebuttal Testimony, page 3.

14. *Ibid*.

15. T.E., October 11, 1983, page 149.

16. Brady Rebuttal Exhibit 1.

17. T.E., October 11, 1983, page 11.

18. Order in Case No. 8227, Western Kentucky Gas Company, entered October 9, 1981, page 2.

19. Item 19, Response to Commission First Data Request.

20. Greable Rebuttal Testimony, pages 12 and 13.

21. Order in Case No. 8734, Kentucky Power Company, entered October 31, 1983, page 4.

22. Item 2, Schedule 2, Response to Commission First Data Request.

23. Case No. 8898.

24. Page 6, Response to Commission Request for Information at the hearing of October 11, 1983.

25. Jackson Rebuttal Testimony, page 6.

26. Federal Reserve Statistical Release.

27. Larkin Exhibit HL-4.

28. Jackson Prepared Testimony, page 13.

29. Ibid.

30. Ibid.

31. T.E., October 11, 1983, page 103.

32. Ibid., page 104.

33. Ibid.

34. Jackson Prepared Testimony, page 8.

35. Ibid., page 9.

36. T.E., October 11, 1983, page 109.

37. Ibid., pages 187 and 188.

38. AG's post-hearing brief, page 4.

39. T.E., October 11, 1983, page 100.

40. AG's post-hearing brief, page 4.

41. Powell Prepared Testimony, page 10.

42. T.E., October 11, 1983, page 56.

43. Ibid., page 34.

44. Powell Prepared Testimony, page 7.

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 8839 DATED December 1, 1983.

The following rates and charges are prescribed for the customers in the area served by Western Kentucky Gas Company. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under authority of this Commission prior to the date of this Order.

GENERAL SERVICE RATE G-1

Rate - Net:

Base Charge: $1.93 per meter per month for residential service.
$4.53 per meter per month for non-residential service

Commodity Charge: $4.4774 per 1,000 cubic feet.

Minimum Charge - Net:

A. The Base Charge

INTERRUPTIBLE SERVICE RATE G-2

Availability of Service:

A. Available on an individually metered service basis to commercial and industrial customers for any use as approved by the Company on a strictly interruptible basis, provided adequate auxiliary equipment and fuel is maintained to meet periods of gas curtailments, subject to suitable service being available from existing transmission and/or distribution facilities and when an adequate supply of gas is available to the Company under its purchase contract with its pipeline supplier.

B. The supply of gas provided for herein shall be sold primarily on an interruptible basis; however, in certain cases and under certain conditions the contract may include High Priority service to be billed under "General Service Rate G-1" limited to use and volume which, in the Company's judgment, requires and justifies such combination service.

C. The contract for service under this rate schedule shall include interruptible service or a combination of High Priority service and Interruptible service; however, the Company reserves the right to limit the volume of High Priority service available to any one customer.

Delivery Volumes:

B. High Priority Service:

The volume for High Priority service shall be established on a High Priority Daily Contract Demand basis which shall be the maximum quantity the Company is obligated to deliver and which the customer may receive in any one day, subject to other provicions of this rate schedule and the related contract.

C. Interruptible Service:

The volume for Interruptible service shall be established on an Interruptible Daily Contract Demand basis which shall be the maximum quantity the Company is obligated to deliver and which the customer may receive subject to other provisions of this rate schedule and the related contract.

D. Revision of Delivery Volumes:

The Daily Contract Demand for High Priority service and the Daily Contract Demand for Interruptible service shall be subject to revision as necessary so as to coincide with the customer's normal operating conditions and actual load with consideration given to any anticipated changes in customer's utilization, subject to the Company's contractual obligations with other customers or its supplier, and subject to availability of the gas if an increased volume is involved.

Rate - Net:

A. High Priority Service:

The volume of gas used each day up to, but not exceeding, the effective High Priority Daily Contract Demand shall be totaled for the month and billed at the "General Service Rate G-1".

B. <u>Interruptible Service:</u>

All gas used per month in excess of the High Priority Service shall be billed at $4.3674 per 1,000 cubic feet.

LARGE VOLUME INTERRUPTIBLE SERVICE RATE G-3

APPLICABLE:

Entire Service Area of the Company
(See list of towns - Sheet No. 24)

Availability of Service:

Available on an individually metered service basis to commercial and industrial customers for any use as approved by the Company on a strictly interruptible basis, provided adequate auxiliary equipment and fuel is maintained to meet periods of gas curtailments, and when customer requires and contracts for not less than 200,000 Mcf per year, subject to suitable service being available from existing transmission and/or distribution facilities and when an adequate supply of gas is available to the Company under its purchase contract with its pipeline supplier.

Special Conditions:

If a customer contracts for gas under this rate schedule and fails to meet the minimum requirements of 200,000 Mcf per year, the contract shall be subject to cancellation and gas deliveries thereafter shall be billed at the lowest available rate for which the customer qualifies.

Rate - Net:

A. High Priority Service:

The volume of gas used each day up to, but not exceeding, the effective High Priority Daily Contract Demand shall be totaled for the month and billed at the "General Service Rate G-1".

B. Interruptible Service:

All gas used per month in excess of the High Priority Service shall be billed at $4.1974 per 1,000 cubic feet.

Terms and Conditions:

All other terms and conditions under this tariff shall be the same as the Company's Interruptible Service Rate G-2.